



THINGS YOU OUGHT TO KNOW  
ABOUT CASEMENT WINDOWS





## CASEMENT WINDOWS ARE AN

- A Cotswold village of the 14th Century illustrating the casement windows of these charming medieval homes.

Photograph courtesy  
Architectural Forum

- For hundreds of years the beauty and charm of the casement window has been inextricably linked with dwelling places and since the first "wind's door" in ancient castles it has provided the home owner with the most practical and satisfactory means of furnishing light and ventilation within the house.

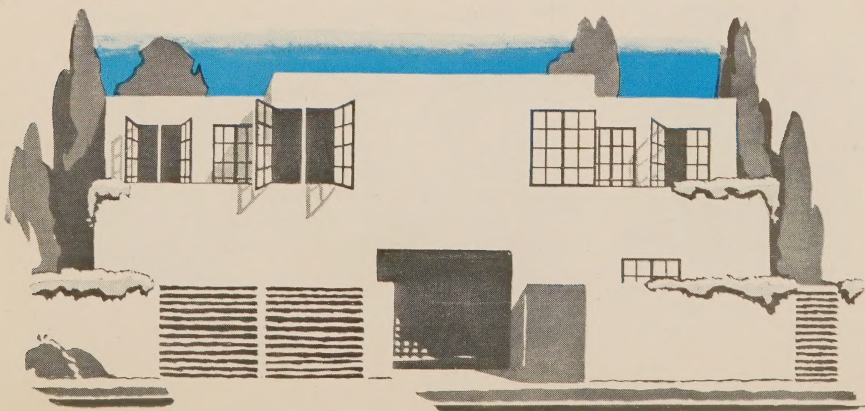
- It is not hard to understand why this has been so because the advantages of the casement are many when compared to any other type of window. No one will deny its beauty whether used in the low thatched cottage typical of rural England or placed in classic dignity in a pilastered facade. It has always been adaptable to style and period with architectural authenticity.

- The casement is a superb ventilator; when swung wide the window is not just half open but entirely so, and, at other times convenient adjustment permits exactly the right amount of ventilation without draft. Equipped with modern hardware it is the easiest window to screen, the simplest to drape, the quickest to wash and the most convenient to use.

- The greatest tribute to the casement window however is, that today, when architects are facing new and different problems of design involving a new technique in handling line and mass, the casement is more popular than ever before. It not only harmonizes with the new simple forms of glass area but is structurally efficient as well. It is the purpose in the following pages to present a few ideas about casement windows which you may not have thought of and which may help you to get increased pleasure and convenience from the windows in your home.

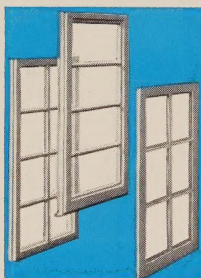
- There are right and wrong ways to use casements . . . there are little details about them which, if neglected, may cause inconvenience or loss of utility. Mainly these things refer to the hardware which operates and controls them and it may be said truly that the hardware makes or mars the casement window. In learning what it is, how it works and what it does we are sure you will be repaid by having casements which will be a lasting satisfaction.

## HERITAGE OF THE HOME





# Things you ought to know about Casement Windows



## casement:

*A window sash opening on hinges:—*  
Webster's Dictionary.

**Advantages** Casement windows swing like doors. In fact, they were known in earlier times as the "wind's door". When they are made of wood they are manufactured in the same way as double-hung windows, except that as only ONE sash is required to fill a window opening, they are generally higher than they are wide and therefore are invariably more pleasing in proportion and beautiful in appearance than any other type of window. Unlike a double-hung window which can never be more than half open, a casement when swung wide permits a full window opening with the extended sash acting as a deflecting ventilator.

**Outswung Casements are best** They should always swing outward. Inswung casements are obsolete. They were used before proper screening methods were developed. They take up valuable space in a room when open; they cannot be properly draped and they cannot be made weathertight.

**Modern construction methods** Modern wood casements may be had double glazed for air conditioning, making the warmest and most efficient window both for northern and southern climates. They may be bought as complete units with frames, (steel casements are always sold that way), they may be "stock" sash or specially made for each job, and the glass areas may be divided into glass panes of any size.



## The exclusive cleaning features of Casements

Two or more hinges are used to hang casements. These may be "close" hinges, the same as used on a door, or "cleaning" hinges as illustrated on page 17, for wood sash. A "cleaning" or "extension" hinge swings the window away from the frame when open and provides two features of convenience found in no other type of window. *It allows the entire outside surface of the sash to be washed as easily from the inside as the inside surface and provides deflected ventilation into the room from both surfaces of the sash.*



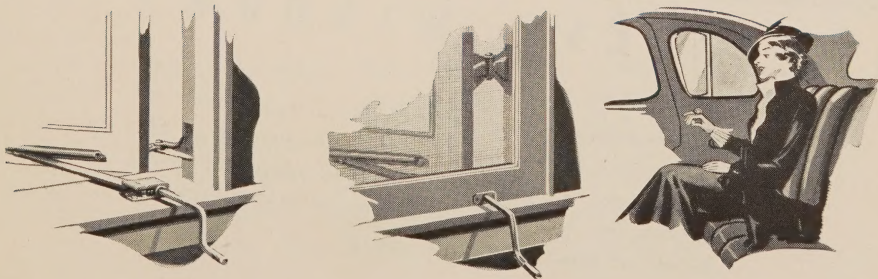
**Screening Advantages** Because double-hung windows are opened and closed by sliding them up and down they must be screened, inconveniently, on the outside where the screens are exposed to the weather and dirt. This makes yearly maintenance a necessity and a chore. Outswung casements however, are *screened inside*. Inside screens are fully protected, kept clean and may be put in or taken out instantly. Furthermore, the window itself never need be touched during the screening season (except for washing) because if the proper type of modern hardware such as Win-Dor is used, *the casement is opened and closed and automatically locked THROUGH THE SCREEN*. This applies to wood screens, metal or roll-screens.

**Operating Convenience** You will want to open and close your casements often, and the hardware which makes them work is, therefore, of the utmost importance. Now, of course, you can use makeshift hardware on casement windows—old fashioned slides, fasteners, even hooks and eyes—but if you are led to do this, through a sense of economy or for some other reason, you will not only regret it every time you struggle with a balky, inconvenient window, but will deprive yourself of many of the advantages which you have a right to expect from your casement windows. Their convenience really depends upon modern, improved hardware.

**Operating Simplicity** The casement operator is a mechanical device having a movable arm connected to the bottom of the window with an open, patented channel. The arm is moved in the channel, thus opening and closing the sash, by a worm and gear (enclosed in a metal housing), which is turned with a handle. The method is simple, positive and automatic because when you quit turning, the window becomes *locked* in any position. The picture on the left (below) shows a Win-Dor casement operator of this type installed on top of the window stool with the sash open. To the right a screen has been installed with a hole bored in it through which the operator handle is inserted. Handles may be permanent or detachable and are made in any length. Operators can be concealed below the stool if desired and the following pages explain different methods of casement control and suggested hardware for both wood and steel casement windows.

**Ideal Method of Ventilation Control** From the above description it is clear that the principles involved in the modern method of Win-Dor casement window operation are identical to the remarkably convenient and effective draft-less ventilation so successfully employed in the modern automobile. And, as in the automobile, not only is the house ventilated in the best way—without drafts—but the sash is just as easily, quickly and *securely* controlled.

**and how to make them convenient**





**Window Problems** The modern practice of using "built-in" units in the new houses designed for more efficient living often evolves a window opening which, without means of easy control, would be highly inconvenient. It is in these places especially, where casement windows are so desirable because with hardware which does things automatically, no reaching or awkward action is required to open, close, adjust or lock them.

**Typical Examples** The sketches on these pages illustrate some common casement window installations which emphasize this point of making them as convenient as they are beautiful with Win-Dor hardware to control them perfectly.

# WHERE



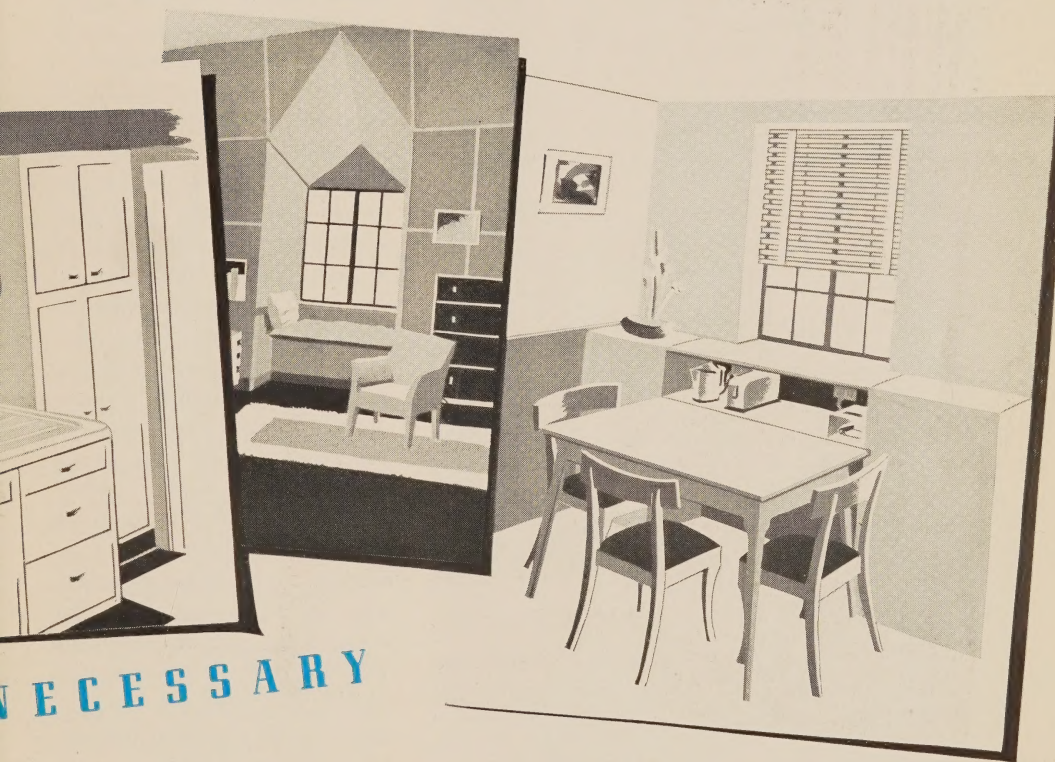
# CONVENIENT WINDOWS ARE

It is sometimes expedient and preferable to locate chests and other furniture in front of windows to take advantage of floor space. Above, this situation is illustrated where conveniently controlled casements are immediately accessible even though the windows are beyond easy reach.



**In the Kitchen** Casements here, especially over the sink, are a pleasure and a joy. With Win-Dor convenient, one-hand control which eliminates reaching and stretching or climbing, they are ideal. Win-Dor Cleaning Hinges, Operator and Top-Closer (see pages 10 and 17) make such windows mighty satisfactory.

**In the Attic** Remodeled attics also invite the use of casements as a happy and practical solution of window installation. The drawing below shows an interesting treatment with a wide window stool and seat below it. Double-hung windows would require reaching and lifting and would never be more than half open.



**Blinds and Shades** Where venetian blinds or other types of shades are used, as shown above, the Win-Dor Series 35 Operator (see pages 9 and 16) avoids interference, as it is operated below the stool with an extension handle of desired length to accommodate "built-in" features surrounding the window. Series 26 Operator, concealed, could also be used.



# The importance of *good hardware*



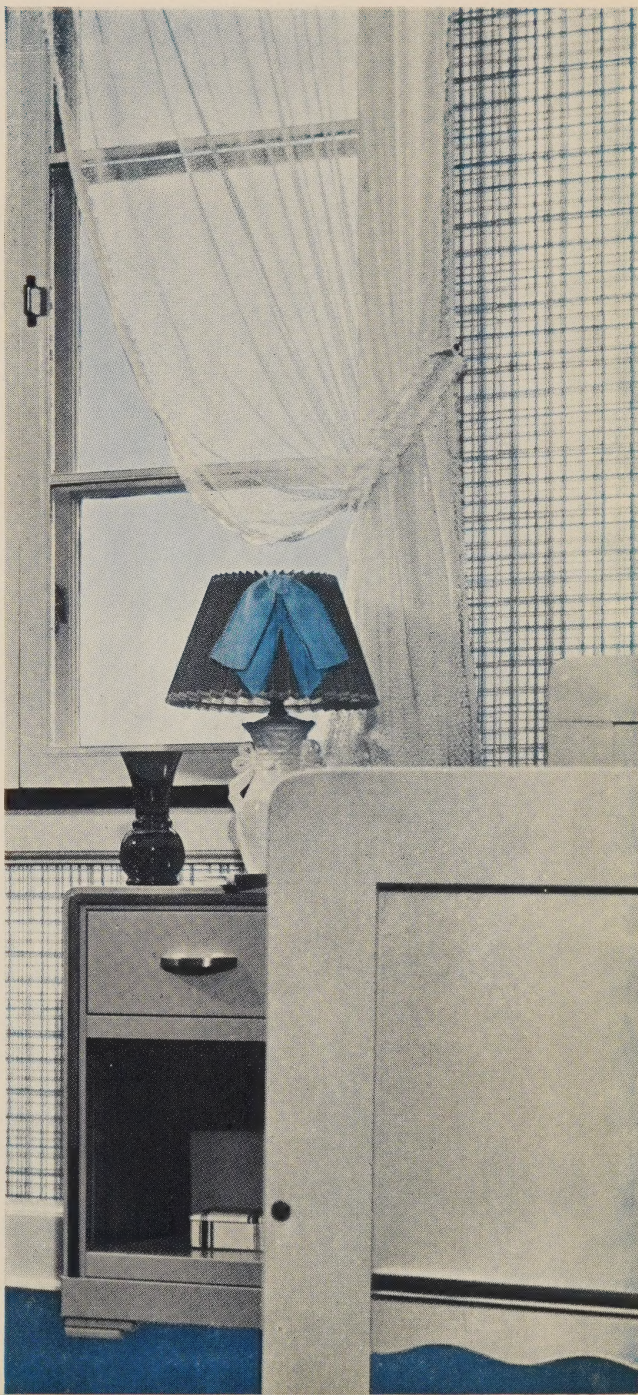
A casement window swinging outward must be securely held when open, it must be easily adjusted and securely locked when closed. The purpose of casement hardware is to do these things conveniently without interfering with screens, shades or drapes. It has required many years to develop a device which will do *all* of them properly and provide casements with a perfect means of control. You can hold a casement open with a hook and eye, you can adjust it with a cheap unreliable contrivance and you can lock it with a common catch . . . but neither collectively or individually are these methods convenient, secure or efficient. No one uses such means who is acquainted with the easier, better way of convenient Win-Dor control for casements which also provides such a sound investment value to homeowner or home-builder who, in the long run, wants the minimum of replacement expense.



## in casement window installation

Win-Dor Operators are the result of years of experiment and research. They and other Win-Dor products described in these pages have been made and improved and tested and perfected since 1906 . . . thirty years of development on one single problem. Today every architect knows about Win-Dor hardware and thousands use it . . . inserting a separate specification in the general specifications to insure their clients of satisfaction and quality for both STEEL and WOOD casements. Certain modern wood casement units are factory-equipped with Win-Dor quality hardware at no extra cost and the same is true of certain steel casements. But in every case you can always secure Win-Dor hardware by specifying it by name. This assures you of getting the convenience, ease of operation and permanent satisfaction that only this hardware can give. There is nothing else like it.

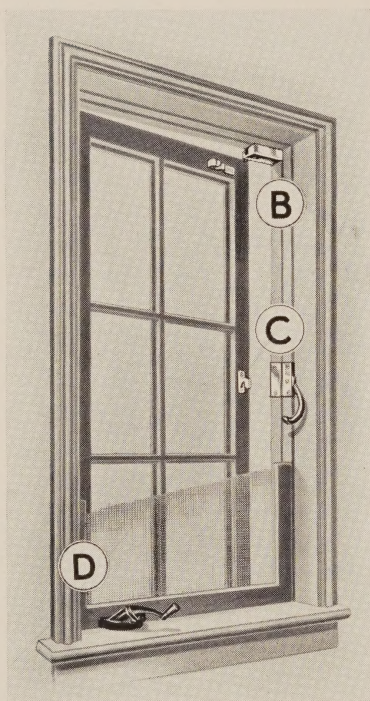
These photographs were taken in a model, demonstration home completely equipped with Win-Dor.



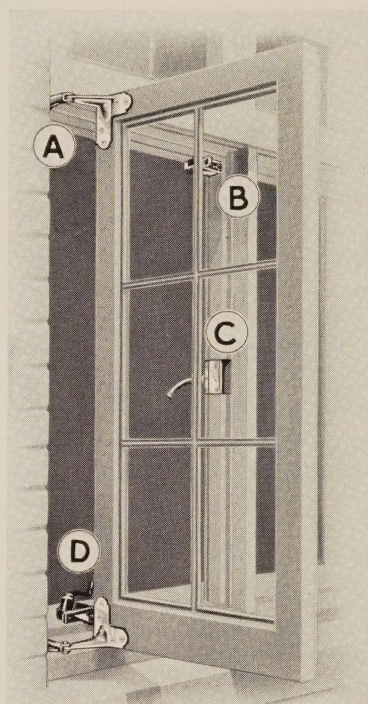


# The correlation of operating

Complete convenience in casement window operation requires several pieces of hardware. The operator will open and close the sash and automatically lock it, but in most every case, unless the casement is a very small one the window should also be automatically closed at the top to prevent warping and to provide tight closing. Sometimes it is expedient to put a manual locking handle in the center of the window especially on tall casements. Besides these things, there are, of course, the hinges. Win-Dor hardware provides all of the necessary equipment for complete casement operation *and each piece of hardware is correlated with all others.* This is important.



**Interior Correlation.** The above illustration is a picture taken on the inside of a room of a modern casement window. It shows (B) Win-Dor Series 45 top closer, (C) Win-Dor Series 800 locking handle, (D) Win-Dor Series 29 operator. In casement installations where the sash is 5 ft. high or higher, this is an ideal arrangement. Of course, on smaller sash the handle is not necessary. Any type of Win-Dor operator may be used.

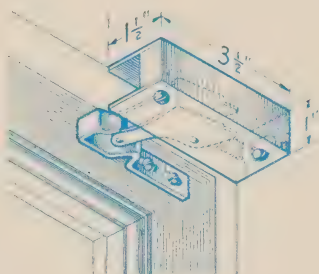


**Exterior Correlation.** This picture illustrates the sash as shown on the left from the outside of the building. Here, the hinges "A" are shown. These are Win-Dor Series 75 extension hinges for cleaning the outside surface of the glass from the inside of the room and are corner reinforcing. All of the products referred to here and on page 9 are described and illustrated in the back of this book.

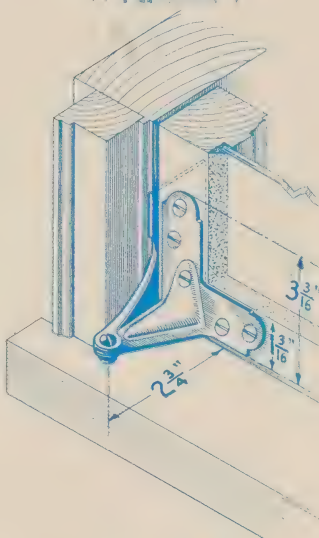


# hardware for casement windows

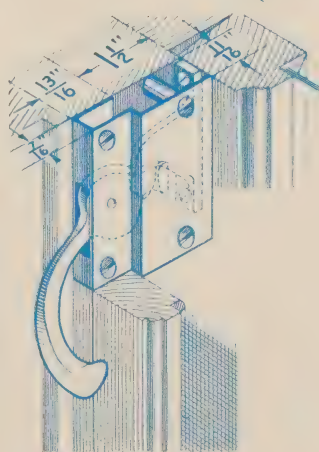
**Win-Dor Top Closer.** On the right is a drawing showing Win-Dor Series 45 top closer which is invariably used with any type of Win-Dor operator. It requires a space of  $1\frac{1}{2}$  by  $3\frac{1}{2}$  inches in the top corner of the window frame and is usually mortised into the screen stop so that it is very inconspicuous after being installed and finished to match the woodwork. It is entirely automatic, having a metal finger which reaches out and engages a keeper on the sash while it is one inch away from the frame. By strong spring action, the casement is then pulled in tightly.



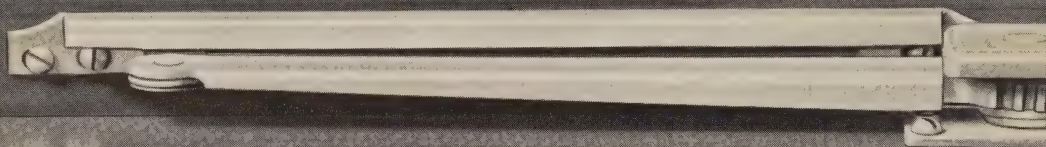
**Win-Dor Extension Hinges.** This drawing shows the lower hinge of a pair of Win-dor Series 75 extension cleaning hinges. Besides the advantage of allowing cleaning space between the sash and the frame when the casement is open, this hinge also provides 12 sq. inches of bearing surface on the window which is important and not available on a pair of standard close hinges or "butts." Win-Dor extension hinges are designed to be unobtrusive when installed and are sturdily made with bronze bushings to give lasting service.



**Win-Dor Locking Handle.** For manual locking of casement windows, Win-Dor Series 800 handle is extremely convenient as it operates around the screen. As shown on the drawing, the screen fits against an off-set in the case of the handle. Obviously, as many different types and sizes of wood screen stops are used for trimming casement windows, it would be impractical to manufacture a handle that would fit every one, therefore, we have made series 800 locking handle for use with screen stops of the size shown on the drawing. This is a standard size and available at any mill making window trim.



# Win-Dor SERIES 26 OPERATOR



**This Operator is, today, *The Specification Standard* of American Architects**

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Win-Dor Series 26 Operator is a product of quality and value proven by performance in over a quarter of a million installations. It automatically locks the sash in any position. It is reversible; and without any change whatever can be used on either right or left-hand sash. It is made with a large *oversize worm of naval bronze* which works against a *machine-cut gear* assuring long life and trouble-free operation. All other parts are heavy and strong, thoroughly rust-proofed. Win-Dor Series 26 Operator may be had in solid brass finished as desired or in steel—rust-proofed and may be used with either close or extension hinges on sash fifteen inches wide or wider.



The wood casement windows in this beautiful residence are equipped with Win-Dor Series 26 Operators, Win-Dor Series 45 Top-Closers and Win-Dor Series 800 Locking Handles. From the smallest cottage to the most pretentious mansion Win-Dor quality hardware can be used economically or lavishly with the same assurance of satisfaction. • • • •



STEEL





# CASEMENTS

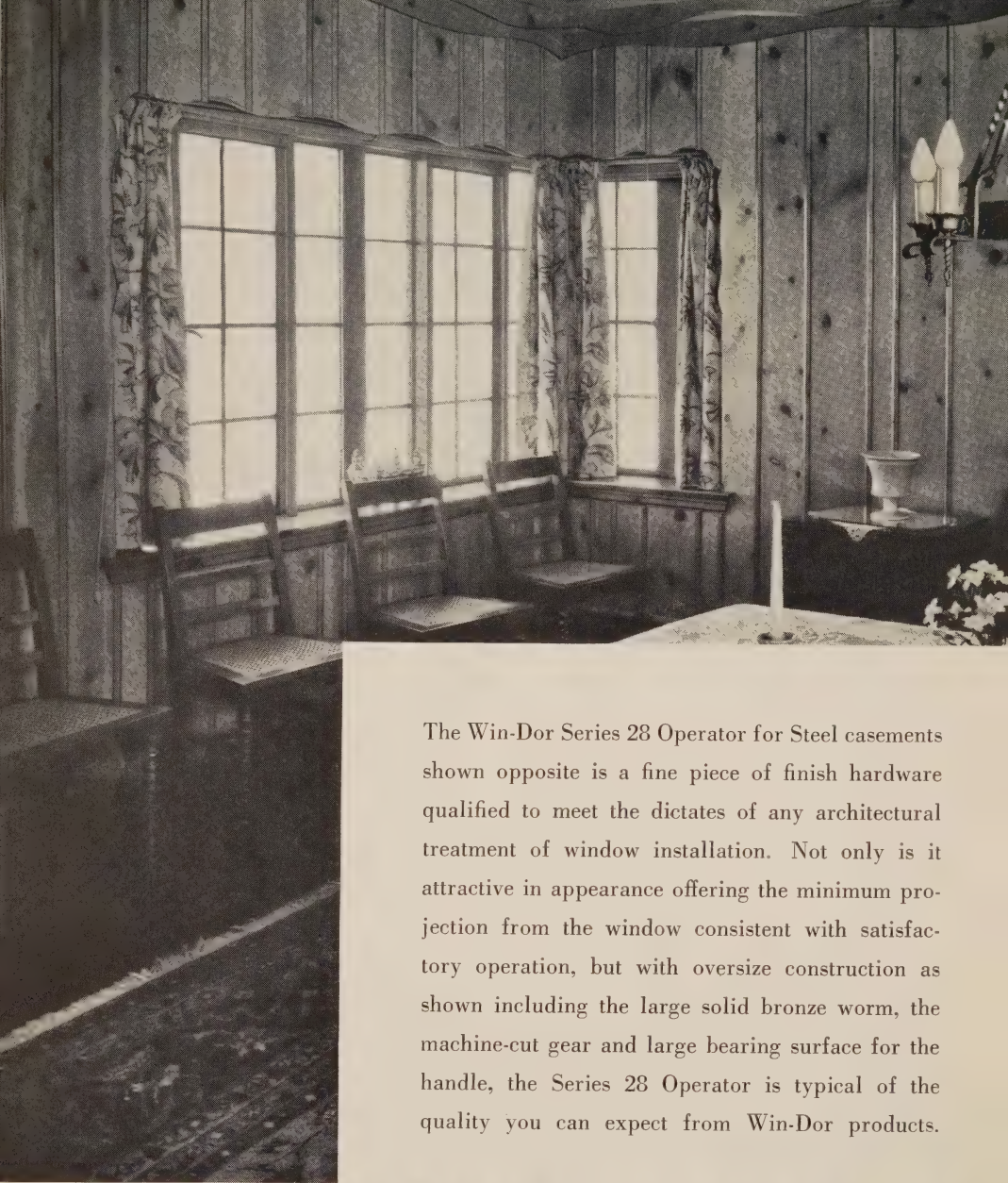
Elsewhere in this booklet we have explained the importance of good hardware for casement windows and that it is necessary for the home-owner or builder to be sure that all casements are equipped with good hardware either through individual selection and purchase; through careful specification by the architect, or through definite instructions to the contractor.

Unlike "stock" windows or even special built wood casements, the steel casement is generally sold with sash, frame, locking handles and operating hardware as an integral unit; in other words completely equipped for setting in the wall. In many cases however this does not mean that the hardware is of good quality. Sometimes it is not. The use of sub-quality or undergrade hardware as standard steel casement equipment occurs simply because the steel window is frequently considered competitively with wood windows *not priced with hardware*. Therefore price becomes an important factor, and the lower the cost of the hardware on the steel window can be kept, the better chance steel sash has of being bought in preference to wood sash.

Win-Dor hardware can be furnished for any make of standard side-hinged out-swung steel casement windows. The use of Win-Dor hardware on steel casements involves no great difference in price between standard window equipment and extra quality Win-Dor operators. Steel casement manufacturers are always glad to receive orders having Win-Dor specifications, because, they know that Win-Dor operators are of the quality which insures satisfaction to the owner and makes the entire window installation one of real investment value.

In regard to steel casements therefore, it is of the utmost importance to the home-owner or home-builder to specify Win-Dor hardware and instruct the architect or the contractor in this respect, because genuine Win-Dor means only one quality—*the best obtainable*.





The Win-Dor Series 28 Operator for Steel casements shown opposite is a fine piece of finish hardware qualified to meet the dictates of any architectural treatment of window installation. Not only is it attractive in appearance offering the minimum projection from the window consistent with satisfactory operation, but with oversize construction as shown including the large solid bronze worm, the machine-cut gear and large bearing surface for the handle, the Series 28 Operator is typical of the quality you can expect from Win-Dor products.

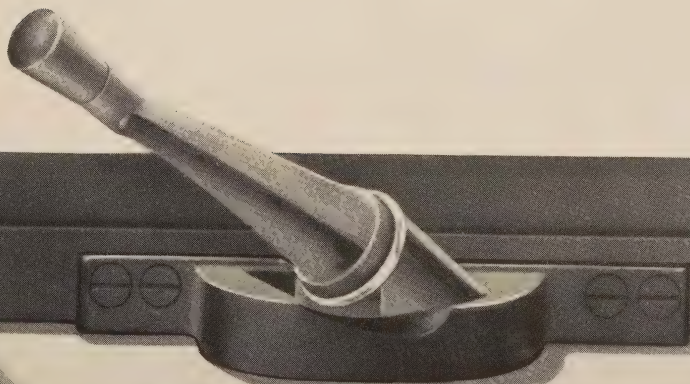
## SERIES 28 OPERATOR



*In addition to the features mentioned on the preceding page, the new Series 28 operator has been designed so that the housing or case has an apron, which when installed, fits tightly against the window sill. This is an improvement which eliminates a dirt pocket under the operator as well as awkward projections, as the flush base encloses and seals the area directly under the case.*

This new Win-Dor Series 28 operator has established itself on sheer merit as a specification choice for steel casement use and based on an enviable performance record this Win-Dor operator is procurable on all makes of steel casements at very little additional cost. By taking the trouble to insist upon Win-Dor Series 28 operator, you will be well repaid in satisfaction which comes from any product of quality.

Of course, Win-Dor Series 28 operator is available and can be furnished at slight additional cost in any of the special hardware finishes, including chromium plate, baked enamel in practically all colors and it is also furnished in solid bronze or brass with Monel metal arms if desired.





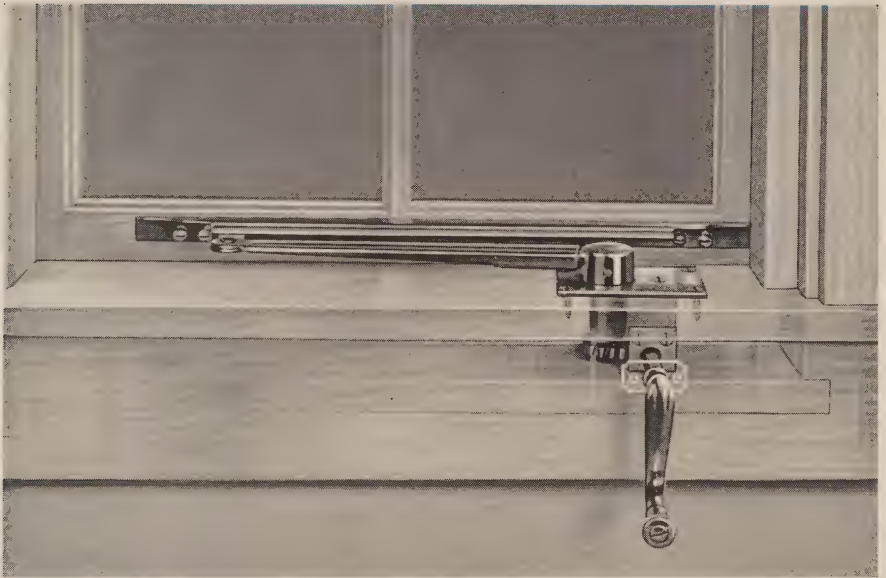
# Win-Dor

## PRODUCTS

*"There is hardly anything in the world that some man cannot make a little worse and sell a little cheaper, and the people who consider price only are this man's lawful prey."*

*John Ruskin*

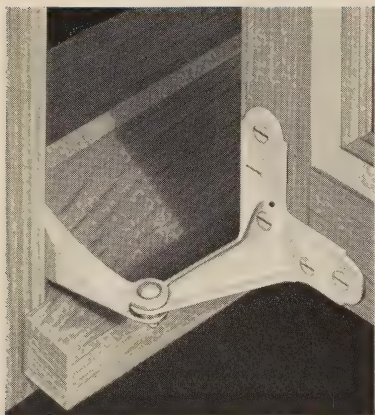
### SERIES 35 OPERATOR



This is the finest operator available for any type of casement window installation. It offers positive, smooth operation and control with superlative convenience and appearance. It is a half-surface type with the gear-housing mortised into the window stool as indicated. Only the turret shaped arm connection is above the stool and even that is fully concealed by the screen rail when the screen is installed in front of it.

Any type of screen may be used without cutting the frame and without interference. The operator is at all times accessible and overcomes the specification of sub-stool installations where concealment is desired. The mechanism may be entirely removed without marring the window trim and as shown it is operated by a handle through the apron. It is made entirely of bronze except the gear which is machine cut steel.

## SERIES 75 EXTENSION CLEANING HINGES

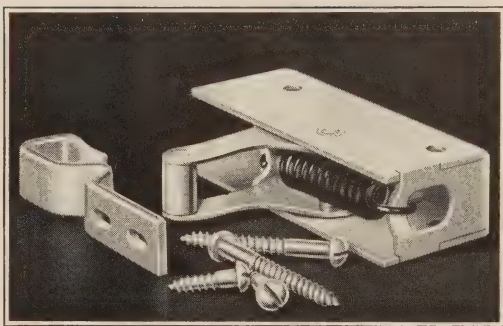


These beautifully designed extension cleaning hinges for outswung wood casements are available with either loose pins or friction knuckles. In certain sections of the country like Northern California and other places, where insect screens are not used, the friction type of hinge is desirable. Both types are corner reinforcing and provide for cleaning; the only change being in the knuckle. Nail holes are provided on the frame leaf of the hinge for the weatherstrip

application. For strength, utility and appearance, equip your casements with these new Win-Dor hinges and make them stronger.

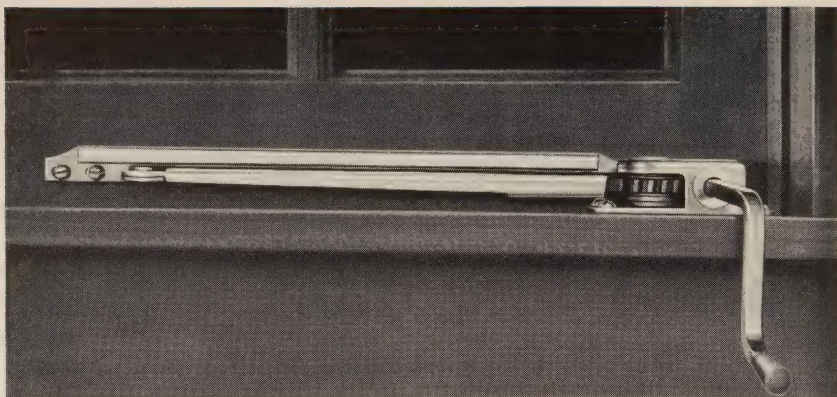
## SERIES 45 TOP CLOSER

This Win-Dor device pulls in the top corners of wood sash automatically. Attached to the upper corner of the window frame, the "keeper" fastened to the sash engages the window over an inch away from the frame and pulls it shut firmly and tightly. The pulling power is more than eight pounds. A top-closer eliminates casement fasts and bolts, prevents and overcomes warped windows, has simple trouble-free action and is easy to install. It is made in steel, rust resistant or solid brass and is reversible. Series 45 Top-Closer is recommended in combination with worm and gear operators. It can also be used advantageously for closet doors with pull knobs which are too narrow for lock sets.



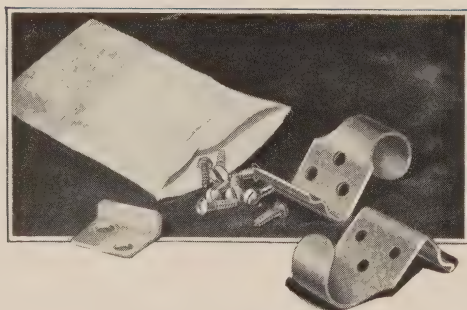


## SERIES 30 OPERATOR



This is the finest and strongest operator available for narrow frames. Only  $1\frac{1}{2}$ " is required between the inside surface of the sash and the screen. It is compact yet powerful and capable of operating and controlling any casement sash 15" wide or wider. Series 30 operator may be used with close butts or extension hinges, although a clearance of 2" is required between sash and screen with extension hinges. It is reversible and may be used on right or left hand sash without any change whatever. Materials and construction are of the same high standard and proven quality found in Series 26 operator described on page 10.

## SERIES 81 SCREEN HARDWARE

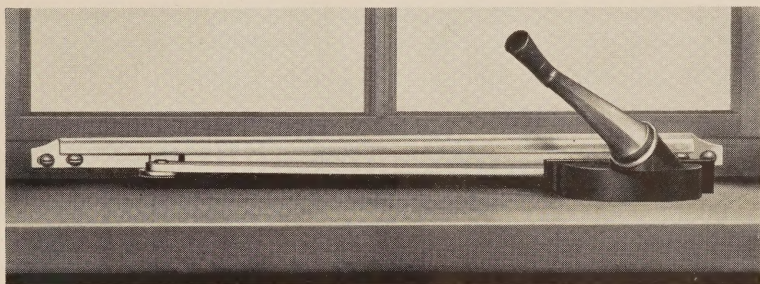


**"Snap-in Snap-out"**  
Simple, Effective, low in cost.

Here is very inexpensive and satisfactory equipment for installing inside wood screens. Spring clips are fastened to each side of screen frame which snap over round-head screws in window frame. At the top, the screen is held by sliding it behind an angle plate also fastened to the window frame.

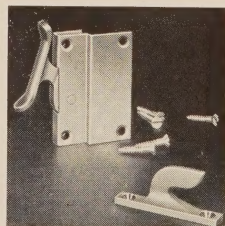
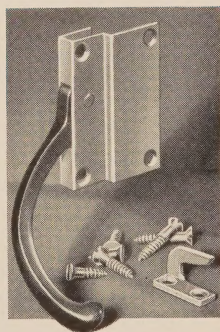
## SERIES 29 OPERATOR

A newly designed and increasingly popular operator for wood casement windows especially adaptable for wide inside window stools. It is made with three types of base which permit proper application on wood or marble, tile, concrete and other materials frequently employed for construction purposes. Series 29 has die-cast zinc housing, large worm and gear, is angle-drive, compact in design and neat in appearance. Inside screen (not shown) is simply notched out for operator.



## SERIES 800 LOCKING HANDLES

These Locking Handles are made for use on single wood casements. Common casement fasteners make it necessary to open the screen to unlock the window. These handles operate *around the screen* and when the sash is pulled in by the operator they close the casement and lock it manually providing tight contact for plain or weather-stripped sash. This method of control is especially efficient with understool installations of Series 26 Operators. The handle is of attractive appearance and is made in enameled iron or in solid bronze. The lower illustration shows the Series 800 Handle in "butterfly" design for use with venetian blinds to provide non-interference with shades and blinds of this type.





# How to secure proper casement installation

Throughout this booklet it has been our purpose to illustrate and describe the more general and important things which a home builder or a home owner ought to know about casement windows. Obviously the means of control or the hardware by which this type of window is made useful and convenient deserves as much consideration as the window itself. Heretofore with the use of casements not as widespread as at present, the hardware factor has not been given the attention which its importance demands. Today, however, when more than half of the modern houses are designed with casement windows, and when *QUALITY is the watchword in building, regardless of the cost of the house*, it behooves the home owner to be as careful in the selection and equipment of his windows as he is of the larger units of construction.

In homes designed and supervised by an architect the window problem can be safely left with him. He knows about casement windows and he knows that Win-Dor hardware with a satisfactory performance record of more than thirty years is the best anyone can buy.

Where no architect is employed and the owner himself supervises construction in conjunction with his contractor it is our suggestion that the decision about casement hardware be referred to the Win-Dor hardware dealer. Generally he is a specialist upon whom you can depend for complete and intelligent service. He will gladly give it and his recommendations based on the *special* knowledge he possesses of Win-Dor products and their uses means that by following his suggestions you will be sure of casement satisfaction from money well invested. Furthermore the Win-Dor dealer has operating samples of Win-Dor products which show the hardware in use enabling you to see how it works, how Win-Dor quality stands out against other devices and what it represents to you in convenience and investment value.

On page two we refer to wood casements in complete units. More than one manufacturer produces this type of window which are *equipped at the factory* with Win-Dor hardware. If you prefer this easy method of buying good casements with good hardware, write to us and we will gladly tell you the name of dealers in your neighborhood who handle these units.

The above suggestions are offered simply as pertinent information for those who are interested in casement windows and are planning to build, who are building or who are remodelling their present homes. They are also important for those who are building for investment to whom convenience as a selling feature and quality as an investment factor, provide worth while considerations.



*All products made and warranted by Win-Dor can be identified by the trade name **Win-Dor** stamped on the hardware or by seal or tag as shown above.*

## Some important Win-Dor facts

*Win-Dor operators will hold a casement sash firmly while open to any degree against any wind-pressure of less than hurricane force without damage to the hardware.*

*A casement equipped with Win-Dor Hinges will support a full grown man without causing any mechanical defect in the hinge. This is as much as a 200 lb. downward pressure on the hinge.*

*Win-Dor operators which have been used constantly for thirty years are still in excellent condition.*

*Win-Dor Operator handles will support the weight of a child without bending or breaking.*

*Win-Dor Top-Closers of special size give twenty-four hour service on railroad coach doors, on pullmans, diners etc., of fast trains.*

*Win-Dor Hardware is used almost everywhere, Canada, South America, Africa, Australia, Hawaii, Philippine Islands etc., etc.*

Win-Dor Hardware is manufactured and warranted against defects in material and workmanship only by

**The Casement Hardware Co., 406 North Wood Street  
Chicago, Ill.  
U. S. A.**

*who have printed and copyrighted this booklet in the U. S. A.*



